

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte DAVID R. PACE, KEN L. CHANG, ALI HOSSEINZADEH  
and MAZIAR AMIRKIAI

---

Appeal No. 1998-0819  
Application 08/541,656

---

ON BRIEF

---

Before BARRETT, FLEMING, and RUGGIERO, Administrative Patent Judges.

FLEMING, Administrative Patent Judge.

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 2 through 9 and 14 through 17, all of the claims pending in the application. Claims 1 and 10 through 13 are canceled.

The invention relates to head suspension assemblies for

miniature fixed disk drives. In particular, the invention is directed to low profile head suspension assemblies.

Independent claim 2 is reproduced as follows:

2. A rotary voice coil actuator assembly for a high capacity disk drive comprising:

an E-block, said E-block comprising at least one short tine;

at least two rigid and substantially flat elongated tine extenders having a height less than substantially 0.300 millimeters fastened at one end to said at least one short tine in a first attachment region;

at least two peg-leg load beams attached to said at least two tine extenders in a second attachment region of said at least two rigid elongated tine extenders, each of said at least two peg-leg load beams having a height substantially less than said at least two elongated tine extenders, said peg-leg load beams having at least two tabs formed integrally thereon and each peg-leg load beam being defined by a curvilinear portion extending from one end of each peg-leg load beam, said curvilinear portion being further defined by a curved edge and a substantially straight edge and includes at least two marginal tabs defined along said substantially straight edge;

at least two data transducer head sliders affixed to a head extension formed on the other end of each of said at least two peg-leg load beams, opposite the curvilinear portion, and including plural electrical connections to a data transducer head located thereon; and

at least two head conductor wires, each of said at least two head conductor wires connected to said plural electrical

Appeal No. 1998-0819  
Application 08/541,656

connections, said at least two head conductor wires dressed along one of said reverse flange peripheral edge portions and bonded by a bonding agent to each of said at least two marginal tabs.

The references relied on by the Examiner are as follows:

Foote 1991	4,994,931	Feb. 19,
Hinlein 1991	5,003,420	Mar. 26,
Jurgenson 15, 1992	5,172,286	Dec.
Aikawa (Japanese)	3-192513	Aug. 22, 1991

Claims 2 through 8, 14 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Foote, Aikawa and Hinlein. Claims 9, 15 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Foote, Jurgenson, Hinlein and Aikawa.

#### **OPINION**

After careful review of the evidence before us, we agree with the Examiner that claims 2 through 8, and 14 through 17 are properly rejected under 35 U.S.C. § 103. Thus, we will sustain the rejection of these claims but we will reverse the rejection of the remaining claims on appeal for the reasons set forth.

Appeal No. 1998-0819  
Application 08/541,656

At the outset, we note the Appellants' statement on page 4 of the brief that claims 2 through 8, 14 and 17 are to be considered as a single group, group I, and claims 9, 15 and 16 are to be considered as a single group, group II ,. We note that Appellants argue the claims based upon these above groupings in the brief. 37 CFR § 1.192 (c)(7) (July 1, 1996) **as amended at** 60 Fed. Reg. 14518 (March 17, 1995), which was controlling at the time of Appellants' filing the brief, states:

For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and, in the argument under paragraph (c)(8) of this section, appellants explain why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

We will, thereby, consider the Appellants' claims 2 through 8, 14 and 17, group I, as standing or falling together and we will treat claim 2 as a representative claim of that group. In addition, we will consider the Appellants' claims 9, 15 and 16, group II, as standing or falling together and we will

treat claim 9 as a representative claim of that group.

On page 6 of the Brief, Appellants quote the Examiner's statement as item (1) that Foote shows a rotary actuator assembly in figures 1 through 4 that includes: storage disks 1a; E-block 5 with an offset ear (Figure 4) with an indented mirror-arm opening between the ear; short tines 5c attach by bolts 5e; heads and gimbals; elongated tine extenders 3d to which load beams 3b are attached." Appellants state that they agree in part but disagree as to the gimbals. The Examiner's response on page 6 of the answer stating that to use a gimbal in Foote would have been inherent. The Examiner points to the background section of Foote, column 1, lines 46 through 50, for the basis of finding inherency stating that "thin, lightweight spring material

providing flexible mobility of the magnetic head," actually describe the structure in use of a gimbal. Appellants do not respond to this argument.

We note that claim 2 scope does not require gimbals. Because the claims stand or fall together and claim 2 is the

representative claim, we fail to find that this limitation is before us for our consideration. In any event, we agree with the Examiner that the Foote structure inherently includes gimbals.

On page 6 of the brief, Appellants disagree with the Examiner's statement that Hinlein shows a peg-leg low beam with a curvilinear portion. On page 7 of the Examiner's answer, the Examiner argues that Hinlein shows a peg-leg low beam in figure 1 with a curved portion generally shown as element 28 and linear portions generally shown as element 24 with tabs 50 mounted on the linear edge of the curvilinear portion. We note that the Appellants have not responded to this argument.

Upon our careful review of Hinlein figure 1, we find that Hinlein does show a peg-leg low beam being defined by a curvilinear portion extending from one end of the peg-leg low beam, the curvilinear portion being further defined by a curved edge and substantially straight edge and includes at least two marginal tabs defined along said substantially straight edge as recited in Appellants claim 2. We agree with

the Examiner's findings that Hinlein shows in figure 1 a curved portion, element 28, in a linear portion, element 24, and tabs, element 50, mounted on the linear edge of the curvilinear portion.

On page 6 of the brief item (6), and in the argument section pages 7 and 8 of the brief, Appellants argue that while the Appellants conceded that the elements claimed individually are old, Appellants maintain that the combination is not suggested by the prior art. Appellants argue that it's only the Appellants' specification that provides the motivation to rebuild Foote's head suspension assemblies as what was done in the Examiner's final rejection and thus is improper use of hindsight.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). It is further

Appeal No. 1998-0819  
Application 08/541,656

established that "[s]uch a suggestion may come from the nature of the problem to be solved, leading inventors to look to references relating to

possible solutions to that problem." ***Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.***, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), ***citing In re Rinehart***, 531 F.2d 1048, 1054, 189 USPQ 143, 149 (CCPA 1976) (considering the problem to be solved in a determination of obviousness). The Federal Circuit reasons in ***Para-Ordnance Mfg. Inc. v. SGS Importers Int'l Inc.***, 73 F.3d 1085, 1088-89, 37 USPQ2d 1237, 1239-40 (Fed. Cir. 1995), ***cert. denied***, 519 U.S. 822 (1996), that for the determination of obviousness, the court must answer whether one of ordinary skill in the art who sets out to solve the problem and who had before him in his workshop the prior art, would have been reasonably expected to use the solution that is claimed by the Appellants. However, "[o]bviousness may not be established using hindsight or in view of the teachings or suggestions of the invention." ***Para-Ordnance Mfg. v. SGS Importers Int'l***, 73 F.3d at 1087, 37

USPQ2d at 1239, *citing W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d at 1551, 1553, 220 USPQ at 311, 312-13. In addition, our reviewing court requires the PTO to make specific findings on a suggestion to combine prior art references. *In re Dembiczak*, 175 F.3d 994, 1000-01, 50 USPQ2d 1614, 1617-19 (Fed. Cir. 1999).

We note that the Appellants have not argued that the Examiner's reasons to combine the prior art are in error. In particular we note that on pages 4 and 5 of the Examiner's answer, the Examiner provides specific findings as to the suggestions to combine the prior art references. In particular, the Examiner finds that one of ordinary skill would have been motivated to use a peg-leg low beam because the extended legs allow for the wires to be mounted further down the load beam than conventional load beam, thereby providing more accurate and secure placement of the wires. The Examiner further finds that one of ordinary skill in the art would have been further motivated to make the modification because the reduced thickness of the Hinlein load beam allows

for a reduction in the height of the disk drive. We further buttress the Examiner's findings by pointing out that in column 1, lines 50 through 64, Hinlein states that the object of the invention is to reduce the height of the arm while maintaining the same degree of thickness, thereby allowing disks and multiple disk drive to be spaced closer together. Hinlein further states that the size of the disk drive is reduced or, alternately, more disks can be placed in the disk drive of a predetermined size. Therefore, we find

that the Appellants have not pointed to any error on the part of the Examiner for combining these prior art references.

We note that Appellants have chosen not to argue any of the other specific limitations of claims 2 as a basis for patentability. As stated by our reviewing court in ***In re Baxter Travenol Labs.***, 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991), "[i]t is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for nonobvious distinctions over the prior art." 37 CFR § 1.192(a) (July 1, 1996) ***as amended at***

Appeal No. 1998-0819  
Application 08/541,656

60 Fed. Reg. 14518 (March 17, 1995), which was controlling at the time of Appellants filing the brief, states as follows:

The brief . . . must set forth the authorities and arguments on which the appellant will rely to maintain the appeal. Any arguments or authorities not included in the brief may be refused consideration by the Board of Patent Appeals and Interferences, unless good cause is shown.

Also, 37 CFR § 1.192(c)(8)(iv) states:

For each rejection under 35 U.S.C. § 103, the argument shall specify the errors in the rejection and, if appropriate, the specific limitations in the rejected claims which are not described in the prior art relied on in the rejection, and shall explain how such limitations render the claimed subject matter unobvious over the prior art. If the rejection is based upon a combination of references, the argument shall explain why the references, taken as a whole, do not suggest the claimed subject matter, and shall

include, as may be appropriated, an explanation of why features disclosed in one reference may not properly be combined with features disclosed in another reference. A general argument that all the limitations are not described in a single reference does not satisfy the requirements of this paragraph.

Thus, 37 CFR § 1.192 provides that this board is not under any greater burden than the court which is not under any burden to raise and/or consider such issues. Therefore, we are not required to raise and/or consider such issues and we

Appeal No. 1998-0819  
Application 08/541,656

will thereby sustain the Examiner's rejection of claims 2 through 8, 14 and 17 under 35 U.S.C. § 103.

In regards to the rejection of group II claims, Appellants argue on page 7 that Jurgenson does not show or teach swaging outside of the locus or periphery of the data storage disk. We note that Appellants' claim 9 does require "at least one head suspension assembly attached to at least one short tine by swaging of a swaging boss thereof into an opening define on the planar surface of the short tine and support a data transducer head assembly in flying proximity to a data storage surface of the rotating data storage disk, the data transducer head assembly being affixed to a head gimbal portion of the head suspension

assembly at a distal end thereof and facing away from the head suspension assembly in the same direction as the swage boss."

We note that the Examiner has not found any specific evidence as to a teaching of this limitation or why one of ordinary skill in the art would be motivated to make such a

Appeal No. 1998-0819  
Application 08/541,656

modification. Therefore, we will not sustain the rejection of claims 9, 15 and 16.

In view of the foregoing, the decision of the Examiner rejecting claims 2 through 8, 14 and 17 under 35 U.S.C. § 103 is affirmed; however, the decision of the Examiner rejecting claims 9, 15 and 16 under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

Appeal No. 1998-0819  
Application 08/541,656

**AFFIRMED-IN-PART**

LEE E. BARRETT	)	
Administrative Patent Judge	)	
	)	
	)	BOARD OF PATENT
MICHAEL R. FLEMING	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
JOSEPH F. RUGGIERO	)	
Administrative Patent Judge	)	

MRF:pgg  
David B. Harrison  
Quantum Corporation  
500 McCarthy Boulevard

Appeal No. 1998-0819  
Application 08/541,656

Milpitas, CA 95035